
APPENDIX J

Rare Animals of the Black River/Meadow Valley Landscape

This appendix lists each of the rare animal species known to occur on the Black River State Forest/Meadow Valley Landscape (BRSF/MVL) and provides information on their conservation status. “Rare” species are treated here as native species known or suspected to be rare and/or declining in the state. Included are species legally designated as “Endangered” or “Threatened” by the State of Wisconsin, as well as species on the Department’s advisory “Special Concern”. Rare species information for the BRSF/MVL was compiled from existing records in the Bureau of Endangered Resources’ NHI Biological Conservation Database (BCD, now known as Biotics), field inventories, and other data sources.

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Mammals

♦ Timber Wolf (*Canis lupus*) - Threatened, S2

Brief Description: They have silvery gray-brown backs, light tan underparts, and bushy tails. In winter, their fur becomes darker on the neck, shoulders, and rump. They are approximately twice as large as a

Distribution: Currently distributed throughout Canada and Alaska, extends south into Minnesota, Michigan, Wisconsin, Montana, Idaho, and Washington.

Habitat: Remote, contiguous, mixed forest blocks. Large conifer swamps often serve as rendezvous sites probably because of availability of dense cover and nearness to water sources.

State Records: As of 2002 there were 81 packs known to inhabit 20 northwest, north-central, and central Wisconsin counties.

Black River/Meadow Valley Records: As of 2002 there were 13 packs in and adjacent to the Study Area

Conservation Concerns: Poaching, mistaken identification by hunters, disease, and collision with motor vehicles.

♦ Prairie Vole (*Microtus ochrogaster*) - Special Concern, S2

Brief Description: A vole with grayish to dark brown with a good mixture of tawny-tipped hairs. Head and body 3 ½ - 5 inches (89-127 mm), tail 1 – 1 2/5 inches (25-36 mm), weight 1 – 1 ½ ounces (28-42 g).

Distribution: Southwestern Canada south through Oklahoma, east to Ohio.

Habitat: Dry grassy areas along fence lines and in open fields; sandy prairies and slopes, especially if weed or grass grown; abandoned farm fields; seldom in sparsely wooded areas. Preferable habitat seems to be native prairie sod, of which there is little left in the State. It avoids marshes and wet places.

State Records: Southern and southwestern parts of the state, all known populations south of the tension zone.

Black River/Meadow Valley Records: 1 record from 1974.

Conservation Concerns: Uncertain.

♦ Arctic Shrew (*Sorex arcticus*) - Special Concern, S2

Brief Description: One of the most brilliantly colored and attractive shrews. The back, sides, and belly all contrast. In winter, tricolored, with back nearly black; in summer dull brown. Head and body 2 ¾ -3 inches (70-76mm), tail 1 ¼ - 1 2/3 inches (31-42 mm). Weight ¼ - 1/3 ounce (7-9 g).

Distribution: Canada and Alaska south into the northern Midwest states.

Habitat: Tamarack and spruce swamps. Sometimes in alder or willow marshes, rarely in leatherleaf-sphagnum bogs.

State Records: Mostly in the northern half of the state. Scattered records from the southern half of the state.

Black River/Meadow Valley Records: 6 records from the late 1990s.

Conservation Concerns: Uncertain.

♦ Pigmy Shrew (*Sorex hoyi*) - Special Concern, S2

Brief Description: A shrew with upperparts between sepia and brown, undersides smoke gray, tinged with light buff. Tail darkening toward the tip. By weight, probably the smallest living mammal, about the weight of a dime. Eyes: tiny black beads. Nose: pointed and long. Head and body 2 - 2 ½ inches, tail 1 – 1 2/5 inches (35-36 mm), weight 1/10 – 1/7 ounces.

Distribution: Canada and Alaska south through northeastern U.S. and the Great Lakes Region, extending south along the Appalachian range.

Habitat: Among debris and heavy vegetation in woods, clearings, and meadows, particularly those grown to high grass. Avoiding swampy or excessively wet areas, though can be found in cold sphagnum or tamarack bogs.

State Records: 41 records scattered across the state.

Black River/Meadow Valley Records: 4 records.

Conservation Concerns: Uncertain.

◆ **Water Shrew (*Sorex palustris*) - Special Concern, S2**

Brief Description: A large (3-3.5") blackish-grey shrew, with underside paler, sometimes silvery. Stiff hairs along the sides of the feet distinguish from other Midwest shrews. Head and body 3 1/5 – 3 1/2 inches (81-89 mm), tail 2 1/2 - 3 inches (64-76 mm), weight 1/3 – 1/2 ounces (9-14 g).

Distribution: Northern U.S. and Canada. Extends south in the U.S. along the Rockies and the Appalachian Mountains.

Habitat: Marshes, bogs, and cold, small streams with cover along the banks.

State Records: Not common anywhere within range. Collected infrequently in the northern third tier of counties.

Black River/Meadow Valley Records: 1 record from 1997.

Conservation Concerns: Sensitive to water quality changes.

Birds

◆ **Northern Goshawk (*Accipiter gentilis*) - Special Concern, S2N, S2B**

Brief Description: Large gray to brown hawk with pale stripe over eye.

Distribution: Circumboreal

Habitat: Locally remote tracts of forest. These are typically hardwood, hardwood/conifer, or upland conifer stands and have not been recently managed. Nests in young stands are rare. Good numbers of prey animals such as medium-sized birds and mammals near nesting areas are required as well. Doesn't do well in areas dominated by red-tailed hawks or great-horned owls.

State Records: Wisconsin status uncertain. Reportedly declining in the NE. Nests typically reported from northern third of the state. Several nests are known from central WI. A few locations have been recently reported from east central WI as well. A study by WDNR is currently underway to determine nesting density in WI.

Black River/Meadow Valley Records: 4 records, 2 from the late 1990s.

Conservation Concerns: Logging, including clear cutting, thinning, and selective harvesting; increased accessibility to humans due to road building; trails, etc.

◆ **Henslow's Sparrow (*Ammodramus henslowii*) – WI Threatened, S2S3B, SZN**

Brief Description: A small bird (sparrow) characterized by large flat head, large gray bill, and short tail. The head, nape, and most of the central crown stripe is olive-colored, with the wings extensively dark chestnut. The breast is finely streaked.

Distribution: Central and eastern U.S.

Habitat: Open fields and meadows with grass interspersed with weeds or shrubby vegetation, especially in damp or low-lying areas.

State Records: 33 records scattered throughout the state, except for the northern third.

Black River/Meadow Valley Records: 1 record from the mid 1980s.

Conservation Concerns: Decline apparently is related to loss of habitat due to encroaching urbanization, successional change to shrubland or forest, and use for row-crop agriculture.

◆ **Le Conte's Sparrow (*Ammodramus leconteii*) - Special Concern, S2B, SZN**

Brief Description: A smaller sparrow with a bright eyebrow stripe, and with breast stripes confined to the sides.

Distribution: Breeding habitat extends from the northern part of the upper Midwest through a large part of Canada.

Habitat: Weedy prairie marshes, sedge meadows, tall grasses, and weedy hayfields.

State Records: Large majorities of records are confined to the northern third of the state. Verified records are few, but the species is not detected efficiently during surveys as its singing periods are short and song does not carry well.

Black River/Meadow Valley Records: 2 records from the late 1990s, both in marshy areas.

Conservation Concerns: Water level fluctuations, wetland draining, mowing, and burning.

◆ **American Bittern (*Botaurus lentiginosus*) - Special Concern, S3B, SZN**

Brief Description: A stocky medium sized heron with a black neck stripe and outer wing blackish in flight.

Distribution: Eastern and central U.S.

Habitat: Marshy reedy lakes, wet meadows, and sedge meadows.

State Records: Occurs statewide, but local in the southwest, and declining in the southeast. Declining steadily overall in past 15 years. Most recent records are from inventories conducted for state forest master plans in the NW, NE and WC parts of the state.

Black River/Meadow Valley Records: 7 records from the late 1990s.

Conservation Concerns: Shoreline development, wetland alteration, disturbance, recreational boating, or alteration of water quality.

◆ **Red-shouldered Hawk (*Buteo lineatus*) - WI Threatened, S1N, S3S4B**

Brief Description: A large broad-winged hawk with rufous shoulders and black tail with narrow white stripes.

Distribution: Eastern and central U.S. and southeastern Canada.

Habitat: Extensive woodlands with frequent ponds, wooded river bottoms, and timbered swamps.

State Records: Range is statewide. 299 records total.

Black River/Meadow Valley Records: 19 records, post 1972.

Conservation Concerns: Fragmentation of large forest blocks, stand thinning.

◆ **Black Tern (*Chlidonias niger*) - Special Concern, S3B, SZN**

Brief Description: A small tern with a dark, sooty gray body.

Distribution: Breeds from the northern U.S. up through middle Canada.

Habitat: Freshwater marshes and lakes.

State Records: Range is statewide. 44 records total.

Black River/Meadow Valley Records: 8 records, all from 1999.

Conservation Concerns: Water level manipulations, nest depredation.

◆ **Northern Harrier (*Circus cyaneus*) - Special Concern, S2N, S3B**

Brief Description: A medium sized thin bird of prey, pale-gray to brown to cinnamon in color, always with a white patch on rump.

Distribution: Holarctic

Habitat: Forages in open habitats. Nests on ground on hummocks in large treeless areas such as meadows, shrub carr, grasslands, sedge meadows, tall marsh, etc.

State Records: In WI statewide, but rare in heavily forested or plowed landscapes. Rare in the south.

Black River/Meadow Valley Records: 3 records post 1997 found near marshes and peatlands.

Conservation Concerns: Succession of grasslands, activities that disturb the ground during the nesting season, activities that concentrate ground predators, wetland alteration, or direct disturbance.

◆ **Trumpeter Swan (*Cygnus buccinator*) - WI Endangered, S1B, SZN**

Brief Description: A large swan native to North America.

Distribution: Formerly throughout North America. Alaska now contains over 85% of the world's breeding population. Breeding areas outside of Alaska are very localized.

Habitat: Primarily breeds in freshwater, on edges of large inland waters; typically in emergent marsh vegetation, or on a muskrat house, beaver lodge, or island.

State Records: 21 records found in central and western parts of the state. Absent in the south and the east. Reintroduced species.

Black River/Meadow Valley Records: 8 records from the late 1990s.

Conservation Concerns: Sensitive to human disturbance (boating, floatplane use, photography, etc.), and to pollution. Unusually sensitive to lead poisoning due to habitat and foraging behavior.

◆ **Cerulean Warbler (*Dendroica cerulea*) - WI Threatened, S2S3B, SZN**

Brief Description: A small songbird with breeding males recognized by blue back, white undersides and a narrow dark neck stripe.

Distribution: Eastern and central U.S..

Habitat: Large stands of mesic hardwoods and floodplain forest.

State Records: Uncommon and largely restricted to the southern two thirds of the state with occasional breeding season records in the northern third. Has been expanding its range northward. 77 records.

Black River/Meadow Valley Records: 4 records from the 1990s.

Conservation Concerns: Canopy opening, fragmentation, logging of nest sites. Management practices that result in seasonal disturbance of nesting habitat. Rangewide, this species has undergone a 70% decline since 1966, mostly occurring between 1966 and 1979.

◆ **Kirtland's Warbler (*Dendroica kirtlandii*) – U. S. Endangered, Special Concern, SAN**

Brief Description: A 6-inch songbird. Upper parts are blue-gray (brownier in fall and winter), streaked with black; under parts are yellow with black streaks on the sides; white eye ring is broken by black lores and eye line; whitish wing bars are indistinct.

Distribution: Breeding is limited mainly to a small area in Michigan.

Habitat: Shrublands and pine-woodlands.

State Records: There are 10 records of males in the breeding season with no documented nesting. The records are in two pockets, one in the central sands and one in the northwest corner (Douglas County).

Black River/Meadow Valley Records: 6 of the state's 10 records occur in the study area, all but one occur in the late 1980s.

Conservation Concerns: Threats include habitat loss and degradation due to a reduction in fires and forestry practices (replacement of jack pines with red pines or hardwoods) and parasitism by brown-headed cowbird.

◆ **Acadian Flycatcher (*Empidonax virescens*) - WI Threatened, S2S3B, SZN**

Brief Description: A small bird (flycatcher). Olive above, with yellow eye ring, two buffy or whitish wing bars; very long primaries.

Distribution: Middle and eastern U. S..

Habitat: Key habitat requirements are moist deciduous forests with a moderate understory, generally near a stream.

State Records: 34 records occur in the southern half of the state.

Black River/Meadow Valley Records: 2 records from the 1990s.

Conservation Concerns: The primary threat to this species, as with other neotropical migrants, is habitat degradation and fragmentation (and therefore indirectly, cowbird parasitism and nest depredation).

◆ **Common Loon (*Gavia immer*) - Special Concern, S3S4, SZN**

Brief Description: A large aquatic bird (loon). Upper parts are black with a greenish gloss, heavily spotted with white. The under parts are mainly white, the sides of the breast are streaked black and white, and the flanks are black with small white spots. The bill is black, and the iris is brownish ruby.

Distribution: Breeds across Canada and the northern U.S..

Habitat: Lakes containing both shallow and deep-water areas. Water clarity is an important component of breeding habitat selection.

State Records: 7 records in the northern half of the state.

Black River/Meadow Valley Records: 4 records from 1999.

Conservation Concerns: Susceptible to human disturbance at breeding lakes (via development of shoreline areas and aquatic recreational activities), acid rain alterations of lake ecosystems, and mercury poisoning. Also may be jeopardized in some areas by fluctuating water levels at the nest site and by increasing numbers of predators such as raccoons.

◆ **Bald Eagle (*Haliaeetus leucocephalus*) - U. S. Threatened PD, Special Concern, S2N, S3B**

Brief Description: A very large bird of prey with dark back and undersides. Head white or dark in immature. Adults

unmistakable with snowy white heads and tails.

Distribution: North American in distribution. In eastern U.S. generally northern or coastal.

Habitat: Sites with large area of clear surface water. Typically in forested lake complexes or along larger streams in WI.

State Records: Around 700 nesting records concentrated in northern third of the state with scattered outliers in the western, southern and central portions.

Black River/Meadow Valley Records: 3 records from the 1990s, and 1 from 1981.

Conservation Concerns: Logging, shoreline development, wetland alteration, disturbance, recreational, boating, or alteration of water quality, toxic compounds.

◆ **Least Bittern (*Ixobrychus exilis*) - Special Concern, S3B, SZN**

Brief Description: The smallest member of the heron family, the least bittern ranges between 28-36 cm in length. Bitterns also have a laterally compressed trunk and short legs. The head is slightly crested. Whitish, highly visible lines border the scapular feathers. The crown and back of the female is purple-chestnut, whereas those of the male are black.

Distribution: Very large range (southern Canada to South America) and common in many areas.

Habitat: Nest in freshwater wetlands with dense, tall growths of emergent vegetation interspersed with open water.

State Records: 16 recent records in the central and northern portions of the state

Black River/Meadow Valley Records: 4 records last updated in 1999.

Conservation Concerns: Jeopardized by draining, filling, and degradation of marshes and probably by environmental contaminants and unnaturally high densities of predators such as raccoons (Evers 1992). May be negatively impacted by high water levels in the Great Lakes (Sandilands and Campbell 1988).

◆ **Yellow-crowned Night-heron (*Nyctanassa violacea*) - WI Threatened, S1B, SZN**

Brief Description: A stocky heron with a straight, stout, all dark bill; breeding adult has buffy-white crown, black face with white cheek patch, gray under parts, and long white head plumes; juvenile has dusky upper parts with fine white streaks and spots, and dark-streaked under parts.

Distribution: Found in central U.S. and Canada.

Habitat: Swamps and river bottomlands.

State Records: 7 records in the 1980s from the Southwestern corner of the state.

Black River/Meadow Valley Records: 1 record from 1984.

Conservation Concerns: Threats include disturbance and loss/degradation of nesting and foraging habitat. Probably susceptible to reduced reproductive success caused by pesticide contamination.

◆ **Connecticut Warbler (*Oporornis agilis*) - Special Concern, S3B, SZN**

Brief Description: A small songbird with breeding males recognized by gray hood, yellow and olive body and a white eye

Distribution: South central Canada and north central U.S..

Habitat: Medium aged to older Jack pine forests with some understory and also reported from conifer bogs.

State Records: Uncommon and largely restricted to the northern tiers of counties with an outlier in central Wisconsin. 13 records are known so far.

Black River/Meadow Valley Records: 2 records in the 1990s.

Conservation Concerns: Harvesting/salvaging jack pine has reduced the area of suitable habitat available for this bird. Management practices that result in seasonal disturbance of nesting habitat for habitat fragmentation.

◆ **Kentucky Warbler (*Oporornis formosus*) - WI Threatened, S2B, SZN**

Brief Description: A 13-cm bird (warbler). Bold yellow spectacles separate black crown from black on face and sides of neck; under parts are entirely yellow, upper parts bright olive.

Distribution: Large breeding range in the eastern (mainly southeastern) U.S..

Habitat: Forest - hardwood and forested wetland.

State Records: 29 breeding records from the southwestern portion of the state.

Black River/Meadow Valley Records: 1 record from 1997.

Conservation Concerns: Probably adversely affected by forest fragmentation.

◆ **Osprey (*Pandion haliaetus*) - WI Threatened, S3S4B, SZN**

Brief Description: A nearly eagle-sized bird of prey with dark back and white undersides. Head white with dark line through eye.

Distribution: Nearly cosmopolitan. In eastern U.S. generally northern or coastal.

Habitat: Sites with large area of clear surface water. Typically in forested lake complexes or along larger streams in WI.

State Records: Nesting population restricted to northern third of the state with scattered outliers in the west and central portions.

Black River/Meadow Valley Records: 8 records from the late 1980s and 1990s.

Conservation Concerns: Logging, shoreline development, wetland alteration, disturbance, recreational, boating, or alteration of water quality, toxic compounds.

◆ **Red-necked Grebe (*Podiceps grisegena*) - WI Endangered, S1B, SZN**

Brief Description: A small aquatic bird. Plumage includes gray upper body with white below. Top of head is black, cheeks are nearly white, neck is dark red, bill is straight and mainly black with yellow at the base, and eyes are dark brown. Diagnostic field characteristic is angular tuft of feathers toward rear of crown. Legs and feet are black. This bird is short-bodied, long-necked, and long billed.

Distribution: Alaska, western and south central Canada, south to Washington, Montana, northeastern South Dakota, Minnesota, rarely elsewhere in northern U.S.; Europe and northern Asia.

Habitat: Nesting habitat includes wetlands with patches of open water and stands of bulrush (*Scirpus validus*, *S. acutus*) or similar emergents. Fresh water lakes, lagoons, floodwaters, and calm rivers with some emergent vegetative cover are commonly used.

State Records: Uncommon spring migrant; rare fall migrant. Rare summer resident. The largest population exists in Rush Lake, Winnebago County. Recently, between 35-65 pairs have nested there annually. In the Grassy Lake Wildlife Area in Columbia County, one to three pairs have nested annually since 1975. Range in Wisconsin is generally the west central and south-central parts of the state. 12 records scattered in the state, but void in the northern third and south-eastern and -western corners.

Black River/Meadow Valley Records: 1 record from 1999.

Conservation Concerns: Wetland habitat loss is the major factor contributing to population declines in the state. The alteration or destruction of wetlands eliminates nesting habitat. Conservation of large inland wetland complexes is critical to the stability of red-necked grebe populations.

◆ **Prothonotary Warbler (*Protonotaria citrea*) - Special Concern, S3B, SZN**

Brief Description: A small bird with entire head and breast deep yellow, almost orange. Wings blue-gray; no bars. Females duller than males.

Distribution: Great Lakes area to the Gulf States in the U.S..

Habitat: River bottomlands, and swamps.

State Records: Mainly distributed in southwest and south central Wisconsin, north along the Mississippi River. Numerous scattered records from the mid part of the state along the Wolf River. Most of the 26 records occurred in 2000.

Black River/Meadow Valley Records: 1 record in 2000 near the Black River.

Conservation Concerns: Logging, shoreline modification.

◆ **Louisiana Waterthrush (*Seiurus motacilla*) - Special Concern, S3B, SZN**

Brief Description: Small, ground-dwelling bird frequently found near water. The throat is mostly white and the underparts are white with dark dense streaks.

Distribution: Central and eastern U.S..

Habitat: Moist forest, woodland, and ravines along streams; mature deciduous and mixed floodplain and swamp forests.

Prefers areas with moderate to sparse undergrowth.

State Records: 21 records, mostly from the west central part of the state, with others in Polk, Rusk, and Waukesha counties.

Black River/Meadow Valley Records: 2 records from 1999 and 2000.

Conservation Concerns: Potential threats include forest fragmentation and activities that cause reductions in forest canopy cover or negatively impact aquatic insect communities.

◆ **Sharp-tailed Grouse (*Tympanuchus phasianellus*) - Special Concern, S2B, S2N**

Brief Description: A medium-sized, stocky, round-winged, chicken-like bird with a narrow, pointed tail that has white outer tail feathers.

Distribution: Found throughout U.S..

Habitat: Requires a mosaic of dense grass and shrubs with rich forb and insect foods during nesting and brood-rearing and a bare open area for lekking. During winter often relies on riparian areas and other sites that support deciduous trees and shrub for feeding, roosting, and escape cover; also utilizes non-native cultivated grains and hedgerow species.

State Records: 4 records from the 1990s in the central sands and northwestern portions of the state.

Black River/Meadow Valley Records: 2 records from 1999.

Conservation Concerns: Historic conversion of native habitat to private cultivation is cited as a major contributor to declines. Natural succession of grasslands and shrublands to forests, accelerated or expanded geographically by artificial fire regimes, have influenced habitat quality and populations in several regions.

◆ **Barn Owl (*Tyto alba*) - WI Endangered, S1B, S1N**

Brief Description: A medium-sized owl with white heart-shaped face, dark eyes, no ear tufts, and long-legs.

Distribution: Nearly worldwide in tropical and temperate regions, near the northern limits of its range in the U.S. halfway up the state of Wisconsin.

Habitat: Woodlands, groves, farms, barns, towns, and cliffs.

State Records: Uncommon, 29 scattered records, but majority from far southern WI.

Black River/Meadow Valley Records: 1 record from 1979.

Conservation Concerns: Uncertain.

Reptiles & Amphibians

◆ **Blanchard's Cricket Frog (*Acris crepitans blanchardi*) - WI Endangered, S1**

Brief Description: A small tree frog (ca 1") with moist skin, warts on the dorsal surface, and the ventral surface in granular. Hind limbs are long in comparison to body size. Toes are extensively webbed, and the terminal discs are scarcely larger than the digits.

Distribution: Northern Mexico/southern northeast through central Ohio, north to central Wisconsin, west to southeastern New Mexico.

Habitat: Marshes along rivers and river floodplains, fens and low prairies usually near permanent water bodies or flowing water in open country. They prefer open mud flats and banks of streams where there is abundant emergent vegetation.

State Records: Historically it was widely distributed across the southern half for the state.

Black River/Meadow Valley Records: 5 records from the early 1980s.

Conservation Concerns: Population declines were noted in the late 1950's and continued through the mid -1980's. Reason for decline is unclear, but there is evidence that this species cannot survive under polluted conditions. The range now seems somewhat stable although sites wink in and out, primarily associated with major storm events during the breeding season.

◆ **Midland Smooth Softshell Turtle (*Apalone mutica*) - Special Concern, S3**

Brief Description: A medium-sized smooth soft-shelled turtle. Carapace length ranges from 17-34 cm for females and

11-18 cm for males. The smooth, leathery carapace is nearly round and is void of spines or tubercles. Color is light brown or tan with numerous dark dots or dashes.

Distribution: Gulf Coast from western Florida to eastern Texas, north to eastern New Mexico, southern South Dakota, Wisconsin, and northwestern Pennsylvania.

Habitat: Large rivers and streams; in some areas also found in lakes, impoundments, and shallow bogs (Ernst and Barbour 1972). Usually in water with sandy or mud bottom and few aquatic plants. Often basks on sandbars and mudflats at edge of water. Eggs are laid in nests dug in high open sandbars and banks close to water.

State Records: In WI, there have only been only 3 records, each from a major river system: Mississippi (1946), Wisconsin (1967), and the Black (1997) Rivers. This species is nowhere abundant in Wisconsin.

Black River/Meadow Valley Records: 1 record in the Black River in 1997.

Conservation Concerns: Historically harvested for turtle soup.

◆ **Wood Turtle (*Clemmys insculpta*) - WI Threatened, S3**

Brief Description: A medium sized semi-terrestrial turtle with the upper shell sculptured into concentric ridges and grooves similar in appearance to wood grain.

Distribution: Canada, north central and northeastern U.S.

Habitat: Restricted to forested areas along fast moving streams. Nests in nearby open sand or gravel.

State Records: Essentially statewide. Rare in the southwest and east-central portions, absent in the southeast.

Black River/Meadow Valley Records: 6 records from the west half of the study area.

Conservation Concerns: Lack of secure nesting habitat. Road kills. Harvesting for pet trade and or human consumption. Water quality degradation. Disturbance of nesting areas during incubation period. High densities of mammalian nest predators. Management opportunities might include protection of traditionally used nest sites.

◆ **Yellow-bellied Racer (*Coluber constrictor*) - Special Concern, S2S3**

Brief Description: A 30-50 inch long snake. Dorsum is highly variable in color: plain brown, gray, olive or dull to dark blue. Underside is typically yellow or cream.

Distribution: North Dakota and Iowa to Texas and Louisiana.

Habitat: Inhabits various open habitats, ranging from agricultural areas to open woodland and streambanks. When inactive, hides underground, in crevices, or under surface cover. Adults often hibernate communally, sometimes partly submerged in water. Commonly climbs shrubs and small trees. Eggs are laid in an underground tunnel or burrow, rotting stump, sawdust pile, or under a rock.

State Records: 3 current records in the southwestern quarter of the state.

Black River/Meadow Valley Records: 1 record from 2000, near the South Morrison Creek Marsh.

Conservation Concerns: Uncertain.

◆ **Northern Ringneck Snake (*Diadophis punctatus edwardsii*) - Special Concern, S3?**

Brief Description: A slender snake with a yellow, cream, or orange neck ring and bright yellow, orange, or occasionally red belly. The underside is free of markings or may be marked with an irregular row of black spots. Spots are more common where this subspecies intergrades with the prairie ringneck snake (*Diadophis punctatus arnyi*). The neck ring may be interrupted, obscure, or occasionally absent. Adults are 12-15" long.

Distribution: This subspecies ranges from far southeastern Canada and northeastern U.S. west to northeastern Minnesota and south to northern Alabama.

Habitat: Northern Ringneck Snakes prefer to live in moist areas in forests, grasslands, cut over areas, rocky wooded hillsides, or ledges along streams. They are most often seen under flat rocks, logs, or the loose bark of dead trees. They are believed to be highly fossorial.

State Records: Specimens verified from twenty-six counties, distributed mainly north of the tension zone. Populations from the southern central and southeastern counties are believed to be extirpated. This subspecies apparently does not extend into the driftless area.

Black River/Meadow Valley Records: 2 records from the 1990s.

Conservation Concerns: Uncertain.

◆ **Blanding's Turtle (*Emydoidea blandingii*) - WI Threatened, S3**

Brief Description: Medium size turtle with a bright yellow underside of its neck. Its head, tail, and limbs are blue-black, while the underside of its shell (or plastron) is yellow, with brown or black splotches, and is hinged. Its upper shell (or carapace) is usually black speckled with yellow, or horn colored and mottled with brown.

Distribution: Great Lakes Region extending west through Iowa. Disjunct population in Massachusetts, and southeastern New Hampshire and Maine.

Habitat: A semi-aquatic turtle that prefers open, grassy marshes containing shallow water, but will move to ground adjacent to water to forage or bask.

State Records: Ranges across most of the state in appropriate habitat, except for far northern tier of counties. 177 records.

Black River/Meadow Valley Records: 15 records, mostly from the late 1990s.

Conservation Concerns: Uncertain.

◆ **Four-toed Salamander (*Hemidactylium scutatum*) - Special Concern, S3**

Brief Description: A small brown to rich red-brown terrestrial salamander with the underside porcelain white with irregular black flecks. Four rather than five toes on the hind feet distinguish this from all other terrestrial WI salamanders.

Distribution: Found in the eastern U.S. and southeastern Canada.

Habitat: Requires moist, mature, usually deciduous forest with high quality leaf litter and an abundance of downed wood in advanced stages of decomposition. These forests must also contain appropriate breeding sites, which are typically woodland ponds or seeps with abundant mosses. Nesting habitat is usually in sphagnum moss mounds directly adjacent to shallow fresh cool water.

State Records: There are about 40 records for the state from twenty-two counties, but most of those from southern WI are old and need to be verified. As a result, this species was recently added to the NHI Working List as status undetermined. Most recent records are from inventories conducted for state forest master plans in the NW, NE and WC parts of the state. The recent discovery of their breeding habitat has resulted in many of these new records.

Black River/Meadow Valley Records: 4 records in moist areas from 1998.

Conservation Concerns: Timber harvesting practices resulting in increased light and decreased humidity, canopy openings or reduced downed wood, wetland modification (draining, impoundment, dredging), or alteration of water quality.

◆ **Western Slender Glass Lizard (*Ophisaurus attenuatus*) - WI Endangered, S2**

Brief Description: A lizard with a snake-like appearance with a long tan, brown, or bronze cylindrical body with no limbs, pointed snout, and narrow head. A dark brown to black stripe runs along the middle of the back from head to tail. Two additional stripes run immediately above the lateral groove and four narrow stripes run below the groove. Unlike a true snake it has eyelids and external ear openings, plus the ability to shed part of its tail. Average total length 18-24 inches, although they may reach 36 inches, two-thirds may be tail.

Distribution: South central U.S. from southern Texas north through most of Indiana. Disjunct population in west-central Wisconsin.

Habitat: Oak savannas, sand prairies, old fields, and pine barrens in central Wisconsin.

State Records: There are 45 records from a band of central Wisconsin counties extending from LaCrosse County in the west to Waushara County in the east.

Black River/Meadow Valley Records: 2 records from 1980 and 1994.

Conservation Concerns: Urban and agricultural development, especially increased road density and monotypic pine plantations are factors contributing to their Endangered status.

◆ **Bullsnake (*Pituophis catenifer*) - Special Concern, S3S4**

Brief Description: Large, stout-bodied snake, 127-200 cm in total length. The dorsal ground color is yellow or cream with 38-53 dark blotches patterned posteriorly.

Distribution: Found from central Wisconsin south to Texas and northeastern Mexico, and from western Indiana west to southern Alberta, Canada. In Wisconsin, they occur mostly in the southwestern corner.

Habitat: Dry and dry-mesic prairies, oak savannas, pine barrens, and oak openings.

State Records: There are 19 occurrences in the state. The majority in the southwestern corner.

Black River/Meadow Valley Records: 3 record from 1933.

Conservation Concerns: Uncertain.

◆ **Bullfrog (*Rana catesbeiana*) - Special Concern, S3**

Brief Description: Largest North American frog. Plain or nearly plain green above, or with a netlike pattern of gray or brown on a green background. No dorsolateral ridges on trunk.

Distribution: Eastern and central North America. Introduced widely outside their range.

Habitat: A wide variety of wetlands and vegetated edges of open water bodies.

State Records: Widely distributed and scattered throughout the state in appropriate habitat. Widely introduced, and it is difficult to distinguish natural populations from introduced ones.

Black River/Meadow Valley Records: 3 records from the late 1990s.

Conservation Concerns: Uncertain.

◆ **Eastern Massasauga Rattlesnake (*Sistrurus catenatus catenatus*) - WI Endangered, S2**

Brief Description: A medium-sized rattlesnake, ranging from 30 to 36 inches.

Distribution: Occurs in the southern Great Lakes region and Midwest.

Habitat: Sphagnum bogs, fens, swamps, marshes, shrub-dominated peatlands, wet meadows, and floodplains to dry woodland; prefers seasonal wetlands with mixture of open grass-sedge areas and short closed canopy (edge situations).

State Records: 55 state records limited to the southwestern and west-central portions of the state.

Black River/Meadow Valley Records: 15 records.

Conservation Concerns: Decline has been due to habitat loss and fragmentation caused by agricultural development, urbanization, damming, and drainage of wetlands. Natural vegetation succession (encroachment of dense woody vegetation) is a significant cause of habitat loss in many areas. In some areas deliberate killing by humans is a problem, as is mortality from automobiles, late season burning, summer mowing, and pasturing of pigs in massasauga habitat.

◆ **Western Ribbon Snake (*Thamnophis proximus*) - WI Endangered, S1**

Brief Description: A small-medium sized snake, ranging from 20-30 inches. Ground color may be olive, brown, or black. Middorsal stripe may be yellow, orange, red, or brown.

Distribution: Southern Wisconsin to Costa Rica; west to New Mexico, east to Indiana and Mississippi.

Habitat: Found in vicinity of streams, lakes, ponds, sloughs, and marshes. Often in water-edge vegetation. Sometimes found in terrestrial habitats. Underground when inactive.

State Records: 4 records from the central portion of the state.

Black River/Meadow Valley Records: 1 record from 1928.

Conservation Concerns: Uncertain.

Fish

◆ **American Eel (*Anguilla rostrata*) - Special Concern, S1S2**

Brief Description: An elongate, almost snakelike fish with a protruding lower jaw.

Distribution: Breeds in the Atlantic Ocean. Females migrate up tributary systems as far west as western Lake Superior and tributaries, and the Upper Mississippi River.

Habitat: Large streams and lakes, preferring muddy bottoms and still waters.

State Records: Uncommon to rare in the Mississippi River and tributaries. Considered an oddity in the Great Lakes tributaries of WI.

Black River/Meadow Valley Records: 1 record from the Black River in 1975.

Conservation Concerns: Fish toxicants, migration barriers such as dams.

◆ **Pirate Perch (*Aphredoderus sayanus*) - Special Concern, S2S3**

Brief Description: A small fish with a stout body, slightly compressed laterally, elevated at base of dorsal fin; caudal peduncle thick. Mouth large, oblique, with lower jaw projecting. Back dark olive to black; side lighter; belly yellowish. Two narrow, vertical bars separated by a pale interspace at base of caudal fin. Dorsal and caudal fins slate colored, other fins more lightly pigmented.

Distribution: Great Lakes Region, Mississippi River basin, southeastern U.S., and Mid-Atlantic States.

Habitat: Oxbows, overflow ponds, sloughs, marshes, ditches, and the pools of low gradient streams. It is found over sand, or over soft, muck bottoms covered with organic debris. Frequently it is associated with brush piles or dense aquatic vegetation. Prefers quite water, seldom in sluggish or stronger current.

State Records: Occurs in Mississippi River and Lake Michigan drainage basins, where it reaches the northern limit of its distribution. The principal population centers are the lower Wisconsin River and its tributaries, and the Des Plaines River watershed.

Black River/Meadow Valley Records: 1 record from the Lemonweir River in 1994.

Conservation Concerns: Shoreline modifications.

◆ **Redside Dace (*Clinostomus elongatus*) - Special Concern, S3**

Brief Description: A small, slender fish with a narrow head and a sharp snout.

Distribution: Widespread in eastern U.S. and adjacent Ontario.

Habitat: Small to medium, cool, clear, rubble and gravel-bottomed streams.

State Records: 98 records throughout the state mostly in smaller rivers.

Black River/Meadow Valley Records: 1 record from 1977.

Conservation Concerns: Habitat degradation.

◆ **Western Sand Darter (*Etheostoma clarum*) - Special Concern, S3?**

Brief Description: A small, slender, almost cylindrical, pallid fish with a distinct opercular spine.

Distribution: Spotty distribution in streams from Wisconsin and Kentucky to Texas and Mississippi.

Habitat: Usually in medium and large rivers; most common in slight to moderate current over sandy bottom, though also known from areas of gravel or silt. Also recorded from quiet margins of drainage canals and shallow backwaters. Buries in sand.

State Records: 12 state records, all in medium/large rivers in the western half of the state.

Black River/Meadow Valley Records: 1 record from the Yellow River in 1973.

Conservation Concerns: Habitat degradation is considered to be the primary cause of decline (siltation, impoundments, channelization, etc.).

◆ **Redfin Shiner (*Lythrurus umbratilis*) - WI Threatened, S3**

Brief Description: A small, deep-bodied, thick-skinned, whitish shiner (fish) with small, closely crowded predorsal scales. Snout bluntly pointed. Black bluish gray dorsally, sides and belly silvery.

Distribution: Great Lakes Region extending south almost to the Gulf of Mexico, and west to central Oklahoma.

Habitat: Found occasionally in clear water, but more often in turbid areas at depths of 4-60 inches (0.1-1.5m) over silt, gravel, and rubble. Occur in pool areas of low-gradient, medium size streams.

State Records: Of the state's 73 records, none are in the last 20 years. At the northern limit of its range in the Mississippi River and Lake Michigan drainage basins. Disjunctly distributed in the southern half of Wisconsin.

Black River/Meadow Valley Records: 2 records, 1 from the Black River in 1908 and 1 from Hemlock Creek in 1973.

Conservation Concerns: During most of the year they are tolerant of siltation, but they require clear water during spawning, which may factor into their scant occurrence.

◆ **River Redhorse (*Moxostoma carinatum*) - WI Threatened, S2S3**

Brief Description: Body moderately stout, usually round, often quite compressed in adult males; ventral line curved. Mouth ventral and horizontal; lips deeply plicate, folds almost always smooth, papillae absent; lower lip much broader

than upper lip. Back bronze olive; sides and belly yellowish, brassy or browned.

Distribution: Great Lakes Region extending south to the northern border of Texas, and west to central Kansas.

Habitat: Prefers large rivers and the lower portions of their main tributaries. It inhabits reservoirs, pools, and moderate to swift water over clear gravel and rubble. Seldom encountered in deeper waters with mud, silt, or sand bottoms.

State Records: Most collections are from the late 1970s/early 1980s from the major Wisconsin rivers. Collected from the Mississippi, St Croix, Yellow, Chippewa, Wisconsin, Sugar, Rock, Fox, Black, Wolf, and Apple Rivers.

Black River/Meadow Valley Records: 1 record from 1978.

Conservation Concerns: Uncertain.

◆ **Weed Shiner (*Notropis texanus*) - Special Concern, S2S3**

Brief Description: A small, moderately robust, slightly compressed shiner (fish). Mouth terminal, oblique, tip of upper lip extending to level of midpupil. Eye large. Back olive green with brassy tinge; silvery on sides, belly whitish. Lateral stripe extends through eye.

Distribution: Great Lakes Region, Mississippi River Basin, and Gulf of Mexico states.

Habitat: Sloughs, lakes, and the quiet or sluggish sections of medium-sized streams and larger rivers.

State Records: Mississippi River and Lake Michigan drainage basins. Uncommon in lower Wisconsin River, in the Mississippi River, and in the lower portion of their tributaries. Populations are widely disjunct. At northern limits of its range in WI.

Black River/Meadow Valley Records: 1 record from 1973 in the Lemonweir River.

Conservation Concerns: Apparently extremely sensitive to environmental deterioration or changes, although the factors causing this are not known.

◆ **Gilt Darter (*Percina evides*) – WI Threatened, S2**

Brief Description: A small fish (darter).

Distribution: Wide but discontinuous and shrinking range in eastern U.S.

Habitat: Generally found on the open bottom of fast, stony riffles.

State Records: 27 records mostly in the west-central portion of the state in larger rivers.

Black River/Meadow Valley Records: 1 record from 1979.

Conservation Concerns: Threatened by pollution and habitat alteration.

Aquatic Invertebrates

◆ **Black-tipped Darner (*Aeshna tuberculifera*) - Special Concern, S3**

Brief Description: A large deep blue dragonfly with abdominal segment 10 black on the upper surface.

Distribution: Canada, north-central and northeastern U.S.

Habitat: Larvae are in shallow densely vegetated ponds, including acid bog ponds, peaty acidic lakes, possibly streams. Adults range widely in adjacent areas.

State Records: Adults have been collected rarely but widely in northern and central to south central WI. Factors limiting distribution in WI are not known.

Black River/Meadow Valley Records: 1 record from the late 1990s in peatlands.

Conservation Concerns: Fish stocking, shoreline modifications water quality degradation, water level alterations.

◆ **Green-striped Darner (*Aeshna verticalis*) - Special Concern, S3**

Brief Description: A large clear winged dragonfly with bright blue and gray markings.

Distribution: Northeastern to Midwestern U.S. and southern Canada.

Habitat: Larvae in wetlands with shallow or very limited water and occasionally in cattail marshes. Adults range widely in surrounding areas.

State Records: Widely scattered from northwest to southeast part of the state with no records in the southwest.

Black River/Meadow Valley Records: 10 records, 8 from the late 1990s. All records near peatlands or marshy area.

Conservation Concerns: Wetland alterations.

◆ **Elktoe (*Alasmodonta marginata*) - Special Concern, S4**

Brief Description: A mussel with an elongate, triangular, inflated, and relatively thin shell. Anterior end rounded, posterior end sharply angled, ending in a blunt, squared point. Posterior ridge sharply angled and prominent, posterior slope broad, flat, and covered with fine ridges. Periostracum yellowish green or bright green with numerous rays and dark green spots present. Posterior slope often lighter than rest of shell. Length to 4 inches (10.2cm).

Distribution: In the U.S. it is distributed in the Ohio-Mississippi River and Susquehanna River systems. In Canada it is in the Great Lakes – St. Lawrence system from Lake Huron to the Ottawa River.

Habitat: Medium-sized streams in gravel or mixed sand and gravel.

State Records: Known from 25 waterbodies in Wisconsin. Only common in St. Croix County.

Black River/Meadow Valley Records: 3 records from 1997.

Conservation Concerns: Increased sedimentation, impoundment.

◆ **Aurora Damselfly (*Chromagrion conditum*) - Special Concern, S3**

Brief Description: A 31-39 mm damselfly with a pale blue face and blackbody.

Distribution: Eastern and central U.S.

Habitat: Pools and slow backwaters of clean, often spring-fed streams.

State Records: 15 records throughout the state. Most in the northern and central areas.

Black River/Meadow Valley Records: 6 records occurring post 1989.

Conservation Concerns: Uncertain.

◆ **Purple Wartyback (*Cyclonaias tuberculata*) – WI Endangered, S1**

Brief Description: The circular and compressed shape, nodules on the surface, and purple inner lining of shell distinguish it from other mussel species.

Distribution: Widespread throughout eastern U.S.

Habitat: Found on gravel or mud bottoms of rivers.

State Records: 14 records from the 1990s in the west-central and northern rivers.

Black River/Meadow Valley Records: 1 empty shell found in 1997. Probably no longer living in study area.

Conservation Concerns: Uncertain.

◆ **A Water Scavenger Beetle (*Cymbiodyta acuminata*) - Special Concern, S3**

Brief Description: An aquatic beetle typically brown to black.

Distribution: Bayfield, Door, Douglas, Jackson and Outagamie Co's.

Habitat: Shallow ponds and lakes.

State Records: 9 widely scattered records in the north and central parts of the state.

Black River/Meadow Valley Records: One site known from Black River State Forest (East Fork Pines).

Conservation Concerns: Water level modifications, shoreline modifications.

◆ **A Water Scavenger Beetle (*Cymbiodyta blanchardi*) - Special Concern, SU**

Brief Description: A water beetle.

Distribution: Rangewide distribution unknown.

Habitat: Larvae burrows in substrate of spring fed seeps and streams.

State Records: Only 6 specimens known from 3 WI counties.

Black River/Meadow Valley Records: 2 sites from Black River State Forest including Gullickson's Glen State Natural Area.

Conservation Concerns: Shoreline modifications.

◆ **Splendid Clubtail (*Gomphurus lineatifrons*) - Special Concern, S3**

Brief Description: A large blackish and yellow dragonfly, males with a prominent club that is narrower than the thorax. No yellow spot on top of club.

Distribution: Centered in the Midwest, extending to some of the northern Southern states, western northeastern states, and Mid-Atlantic States.

Habitat: Larvae in medium to large fast-flowing streams with good water quality. Adults usually found within a mile of larval sites.

State Records: 22 records, mostly in the northern counties, except for the 2 records in the central sands region.

Black River/Meadow Valley Records: 2 records from 1997 in the Black River and Halls Creek.

Conservation Concerns: Increased sedimentation, impoundments.

◆ **Skillet Clubtail (*Gomphurus ventricosus*) - Special Concern, S3**

Brief Description: A large black and yellow dragonfly, males with the tip of the abdomen broadly flared (clubtail).

Distribution: Distributed widely across the northern half of the state. Generally upstream of the fall line.

Habitat: Larvae in moderate sized fast clean rivers. Adults usually within a mile of breeding sites.

State Records: 34 records are known in the northern half of the state.

Black River/Meadow Valley Records: 4 records from the late 1990s in the Black River and Halls Creek.

Conservation Concerns: Flow modifications; shoreline alterations. Moderately sensitive to siltation.

◆ **Green-faced Clubtail (*Gomphus viridifrons*) - Special Concern, S3**

Brief Description: A medium sized black and yellow dragonfly, males with the tip of the abdomen moderately flared for a clubtail.

Distribution: Distributed widely across the northern half of the state. Generally upstream of the fall line.

Habitat: Larvae in moderate sized fast clean rivers. Adults usually within a mile of larval sites.

State Records: 40 records are known in the northern half of the state.

Black River/Meadow Valley Records: 4 records from the late 1990s in the Black River and Halls Creek.

Conservation Concerns: Flow modifications; shoreline alterations. This species is moderately sensitive to siltation.

◆ **A Crawling Water Beetle (*Haliplus pantherinus*) - Special Concern, S2S3**

Brief Description: An aquatic beetle

Distribution: Uncommon throughout the state.

Habitat: Ponds, lakes and stream margins.

State Records: 8 records from NW, West-central and East-central WI.

Black River/Meadow Valley Records: One record from Brandy Creek.

Conservation Concerns: Shoreline modifications, flow modifications.

◆ **A Water Scavenger Beetle (*Hydrobius melaenum*) - Special Concern, SU**

Brief Description: An aquatic beetle.

Distribution: Uncommon in Ashland, Door, Iron, and Jackson Co's.

Habitat: Spring-fed streams.

State Records: 8 records from the late 1990s.

Black River/Meadow Valley Records: 3 of the 8 state records are within the study area boundaries.

Conservation Concerns: Shoreline alterations.

◆ **A Water Scavenger Beetle (*Hydroporus badiellus*) - Special Concern, S3**

Brief Description: An aquatic beetle.

Distribution: Common in northern third of WI, but rare elsewhere in the state.

Habitat: Sites containing Sphagnum moss.

State Records: Common in Polk to Marinette Counties; only 10 collection records for the remainder of the state scattered from Jefferson and Shawano counties in the east to Douglas and Jackson counties in the west.

Black River/Meadow Valley Records: All 3 of the state's records occur in the study area from 1997.

Conservation Concerns: Wetland alterations, mowing.

◆ **A Water Scavenger Beetle (*Hydroporus vittatus*) - Special Concern, S3**

Brief Description: An aquatic beetle.

Distribution: Uncommon statewide.

Habitat: Most collections are from small to medium sized streams, also adjacent pond and spring ponds.

State Records: 5 records in the central sands region.

Black River/Meadow Valley Records: All 5 of the state's records occur in the study area from the late 1990s.

Conservation Concerns: Wetland alterations, stream bank modification, flow modifications.

◆ **A Predaceous Diving Beetle (*Ilybius discedens*) - Special Concern, S3**

Brief Description: An aquatic beetle.

Distribution: Unknown.

Habitat: Sites containing Sphagnum.

State Records: 1 state record.

Black River/Meadow Valley Records: First and only record in the state in 1997.

Conservation Concerns: Wetland alterations, mowing.

◆ **A Predaceous Diving Beetle (*Ilybius ignarus*) - Special Concern, S3**

Brief Description: An aquatic beetle.

Distribution: Door, Jackson, Outagamie, and Shawano Counties.

Habitat: Ephemeral ponds and intermittent creeks, possibly associated with small forest streams.

State Records: 6 records from 4 counties.

Black River/Meadow Valley Records: Two recent records from Black River State Forest.

Conservation Concerns: Wetland alterations. Logging?

◆ **A Perlid Stonefly (*Isoperla bilineata*) - Special Concern, S2S3**

Brief Description: An aquatic insect (stonefly).

Distribution: Unknown.

Habitat: Medium to large rivers.

State Records: Twenty-two records from 15 widely scattered counties. Fairly common in west and South-west parts of the state, rare elsewhere.

Black River/Meadow Valley Records: There are two records from Robinson Creek just west of Black River State Forest.

Conservation Concerns: This species is moderately intolerant of organic pollution. Water level modifications and shoreline alterations are also a concern.

◆ **A Perlid Stonefly (*Isoperla marlynia*) - Special Concern, S3**

Brief Description: An aquatic insect (stonefly).

Distribution: Unknown.

Habitat: Large rivers.

State Records: 1 record in the state.

Black River/Meadow Valley Records: 1 record from 1994.

Conservation Concerns: This species is moderately intolerant of organic pollution. Water level modifications and

shoreline alterations are also a concern.

◆ **A Water Scavenger Beetle (*Laccobius reflexipennis*) - Special Concern, S1S2**

Brief Description: An aquatic beetle.

Distribution: Very rare statewide.

Habitat: Margins of streams and ponds.

State Records: Previously only 2 collections known. One recent record from eastern WI.

Black River/Meadow Valley Records: 1 record from 1997.

Conservation Concerns: Water level modifications; dredging, riparian alterations.

◆ **Amber-winged Spreadwing (*Lestes eurinus*) - Special Concern, S3**

Brief Description: A large damselfly, metallic green in color with strongly flavescent wings, which are spread open while perched.

Distribution: Global Range - Central and Eastern Canada, Eastern and Central U.S..

Habitat: Larvae in Sphagnum bordered lakes and pools, and temporary ponds with little vegetation. Adults usually in adjacent emergent vegetation.

State Records: Now known from nine WI counties scattered in all but the SW portion of the state. Factors limiting distribution in WI are not known.

Black River/Meadow Valley Records: 1 record from 1997.

Conservation Concerns: Shoreline modifications, water quality degradation, water level alterations, mowing. Possibly requires fishless waterbodies.

◆ **An Elmid Beetle (*Microcylloepus pusillus*) - Special Concern, SU**

Brief Description: A dark, aquatic beetle.

Distribution: Widespread.

Habitat: Larvae and adults live in streams.

State Records: 3 records in the central sands region, all from the 1990s.

Black River/Meadow Valley Records: 2 of the 3 state records are within the study area boundaries, the third is 2 miles north of the boundary.

Conservation Concerns: Uncertain.

◆ **A Water Scorpion (*Nepa apiculata*) - Special Concern, SU**

Brief Description: A dark brown, strongly flattened aquatic insect that looks like a dead leaf. Adults range from 0.6 to 0.8 inches long with a 0.3 to 0.4 inch 'tail' (breathing tube).

Distribution: Eastern distribution in North America and is quite scarce in the Great Plains region.

Habitat: Lentic - Dense aquatic vegetation.

State Records: 2 state records from the late 1990s.

Black River/Meadow Valley Records: Both state records occur in the study area.

Conservation Concerns: Uncertain.

◆ **Smoky Shadowfly (*Neurocordulia molesta*) - Special Concern, S2S3**

Brief Description: A dull brownish olive dragonfly, with little pattern. Face wholly pale, except for a narrow blackish band that runs along front margin of eye.

Distribution: Found throughout central and eastern U.S.

Habitat: Larvae live under large rocks and on submerged cliff faces in large warm streams. Adults roost in tree foliage and are active for a brief period at dusk and dawn.

State Records: 10 records most in the 1990s from large rivers in the western half of the state.

Black River/Meadow Valley Records: 1 record from 1997.

Conservation Concerns: Unknown, but possibly sensitive to sedimentation.

◆ **Stygian Shadowfly (*Neurocordulia yamaskanensis*) - Special Concern, S3**

Brief Description: A pale golden yellow and brown medium sized dragonfly.

Distribution: Widely distributed in northern half of the state; local elsewhere.

Habitat: Larvae in rapid, moderate to large, warm-water streams with abundant submerged boulders or cliff face. Adults fly only at dusk.

State Records: Known from 25 waterbodies statewide except SE WI.

Black River/Meadow Valley Records: 4 records from the late 1990s.

Conservation Concerns: Unknown, but possibly sensitive to sedimentation.

◆ **A Purse Casemaker Caddisfly (*Ochrotrichia riesi*) - Special Concern**

Brief Description: A caddisfly.

Distribution: Alabama, Illinois, Kentucky, and Wisconsin.

Habitat: Madicolus, living in very shallow water where there is a continuous coat of diatoms, other algae, and a cushion of moss or liverworts through which the water trickles

State Records: 1 record from 1998.

Black River/Meadow Valley Records: First and only state record, 1998

Conservation Concerns: Road on upland behind top of cliff is a potential source of erosion

◆ **Sand Snaketail (*Ophiogomphus smithi*) - Special Concern, S2**

Brief Description: A medium-sized dragonfly with a green thorax, and yellow and black markings.

Distribution: Apparently endemic to the Midwest: Western Wisconsin and northeastern Iowa.

Habitat: Larvae burrow in gravel and sand substrate of moderately fast, small to medium sized, warm water streams. Adults frequent stream edges.

State Records: Found in at least 34 streams in Wisconsin, but only a few populations are large including Robinson Creek in the Study Area. Most records are from the west-central and west-northern portions of the state.

Black River/Meadow Valley Records: 4 records across the entire study area, all from the mid to late 1990s.

Conservation Concerns: Impoundments, sedimentation, and other alterations of water quality.

◆ **Ski-tailed Emerald (*Somatochlora elongata*) - Special Concern, S2S3**

Brief Description: A medium-sized blackish dragonfly with emerald green eyes and light yellowish markings on the thorax.

Distribution: Global Range - Eastern Canada and U.S..

Habitat: Forest streams with intermittent rapids, outlets of lakes and ponds.

State Records: Known from nine WI counties, mostly the northern forested counties with a pocket in Jackson Co. and a historical record from Milwaukee Co. Factors limiting distribution in WI are not known.

Black River/Meadow Valley Records: 2 records from 1997.

Conservation Concerns: Shoreline modifications, water quality degradation, water level alterations.

◆ **Delicate Emerald (*Somatochlora franklini*) - Special Concern, S2S3**

Brief Description: A medium-sized dragonfly, mostly metallic brown.

Distribution: Northern and Eastern U.S. into Canada.

Habitat: Prefers spring-fed sphagnum bogs, and central poor fens. The flight period extends from June through July.

State Records: 16 records from the northern and central portions of the state. 15 of the records occur in the 1990s.

Black River/Meadow Valley Records: All 5 records occur in the late 1990s in central poor fens.

Conservation Concerns: Water level modifications, mowing.

◆ **Warpaint Emerald (*Somatochlora incurvata*) - WI Endangered, S2**

Brief Description: A medium sized slender and elongate metallic brown dragonfly.

Distribution: A modest total known range from Cape Breton Island, west to northern Michigan, south to Massachusetts.

Habitat: Habitat is bogs, fens, and heaths. Wisconsin larval habitat is Central Poor Fen with sphagnum moss. Larvae unknown to science till this study where they were discovered in Komensky Peatlands. Description is in preparation for publication.

State Records: 17 records, all but one in the west-central portion of the state. The other record from Langlade county.

Black River/Meadow Valley Records: 13 of the state's 17 records are in the study area and are from the late 1990s.

Conservation Concerns: Potential threats of habitat degradation from harvesting of peatmoss and fuel peat, cranberry farming, broadcast toxic pollution, and water level alteration leading to inundation or desiccation of the habitat.

◆ **Kennedy's Emerald (*Somatochlora kennedyi*) - Special Concern, S3**

Brief Description: A medium-sized dark dragonfly with emerald green eyes in adult males. Pale stripes on sides ill defined and wide. Legs black, paler basally. Abdomen long and stout. Front of thorax metallic green, with bluish reflections, at either side of which are areas of dull yellow.

Distribution: Canada, New England, and some northern Midwest states.

Habitat: Slow streams through open bogs or marshes. Sedge meadows and central poor fens

State Records: Collected from 17 sites in nine counties. Mostly the northern edge of the state, with other pockets in the central sands and one in Ozaukee county.

Black River/Meadow Valley Records: 2 records from the 1990s found in or near central poor fens.

Conservation Concerns: Water level fluctuations.

◆ **Clamp-tipped Emerald (*Somatochlora tenebrosa*) - Special Concern, S2**

Brief Description: A medium-sized dragonfly, mostly metallic brown.

Distribution: Northern and Eastern U.S. into Canada.

Habitat: Prefers small forest streams with intermittent riffles and pools. The flight period is early July thorough mid-August.

State Records: 7 records post 1988. All from the central portion of the state.

Black River/Meadow Valley Records: 3 of the 4 study area records occur in 1997 all near small streams.

Conservation Concerns: Uncertain, but likely that maintenance of forest canopy over breeding sites is important.

◆ **a stonefly (*Soyedina vallicularia*) - Special Concern, S1**

Brief Description: A stonefly with a light brown body and a yellowish brown head.

Distribution: Nearctic.

Habitat: Seeps associated with streams.

State Records: 1 record in the state in 1997.

Black River/Meadow Valley Records: First and only state record made in 1997 in a seep near Morrison Creek.

Conservation Concerns: Uncertain.

◆ **a water scavenger beetle (*Sperchopsis tessellatus*) - Special Concern, S2S3**

Brief Description: An aquatic beetle.

Distribution: Rare in the western 3/4th of the state (Florence to Dane counties); not known from the eastern quarter.

Habitat: Small, cool streams, usually with sand.

State Records: Twenty to 25 populations are estimated to be in the state. A few recent records from eastern WI.

Black River/Meadow Valley Records: 2 records from the late 1990s.

Conservation Concerns: Water level modifications; dredging, bank alterations.

◆ **Elusive Clubtail (*Stylurus notatus*) - Special Concern, S2S3**

Brief Description: A medium sized blackish dragonfly with yellow markings and an elongate body.

Distribution: Widely distributed in the western half of the state.

Habitat: Larvae live in depositional sand in lower sections of larger warm-water streams. Adults are seldom seen or collected because of their habit of patrolling open river channels away from the shore and perching well up in trees.

State Records: 20 records known from 14 waterbodies in the state.

Black River/Meadow Valley Records: 1 record from 1993 in the Black River.

Conservation Concerns: Sensitive to sedimentation and possibly to streamside openings in the forest canopy.

◆ **Zebra Clubtail (*Stylurus scudderi*) - Special Concern, S3**

Brief Description: A large black and yellow dragonfly with end of abdomen widely expanded in males. Yellow rings on black abdomen distinguish it from other large Clubtails.

Distribution: Global Range - Eastern Canada and U.S..

Habitat: Larvae in cool sandy streams (trout streams) in forested habitats.

State Records: Known from 13 WI counties in the heavily forested northern part of the state with a pocket in Jackson County. Factors limiting distribution in WI are not known.

Black River/Meadow Valley Records: 10 records from the late 1990s.

Conservation Concerns: Shoreline modifications, water quality degradation, water level alterations.

◆ **Black Meadowhawk (*Sympetrum danae*) - Special Concern, S3**

Brief Description: A dragonfly with brightly colored bodies, 3/4-2 1/2" (18-64 mm) long, that are shorter than the wingspan, which is usually 1-4" (25-102 mm). The wings often have bands or spots.

Distribution: Widespread.

Habitat: Larvae inhabit bogs.

State Records: 8 records in the state. Mostly Northern in WI. One as early as 1913.

Black River/Meadow Valley Records: 1 record from 1997.

Conservation Concerns: Uncertain.

◆ **Buckhorn (*Tritogonia verucosa*) - WI Threatened, S2**

Brief Description: Brown or black elongate shell, moderately large, heavy, and has many pustules. Beak sculpture consisting of a series of ridges continuing down the side. The female shell has larger wing-like extensions, which the males lack. Length to 8 inches.

Distribution: Mississippi River drainage; southeast in streams draining into the Gulf of Mexico from the Alabama River systems, west to central Texas.

Habitat: Inhabits fairly deep water on a sand or mud bottom. Also found in riffles and in shallow water (1-3m) of smaller streams.

State Records: Known from the Mississippi, Black, upper and lower Wisconsin, White, St. Croix, Baraboo, Chippewa, Eau Claire, Pecatonica, and Wolf Rivers.

Black River/Meadow Valley Records: 1 record from 1997.

Conservation Concerns: Habitat destruction and river pollution have resulted in declines. Restriction of dredging, impoundments sand and gravel mining, and navigational improvements would benefit this species.

◆ **Ebony Bog Hunter (*Williamsonia fletcheri*) - Special Concern, S3S4**

Brief Description: A tiny black dragonfly with emerald green eyes and whitish rings on the first few abdominal segments.

Distribution: Global Range - Central and Eastern Canada, Northeastern and North-central U.S..

Habitat: Shallow, Sphagnum filled pools including bog moats. Bog lakes deep enough for fish are probably not utilized.

State Records: Now known from 6 WI counties, mostly the central sands region with a pocket in northern-forested counties. This species is very difficult to detect with standard surveys. All of the known breeding sites (19) are the result

of recent state forest inventories. These factors make it possible that more sites are present. Factors limiting distribution in WI are not known.

Black River/Meadow Valley Records: 14 of the state's 19 records are in the study area from the late 1990s. All known sites are in the Central Poor Fen natural community.

Conservation Concerns: Shoreline modifications, water quality degradation, water level alterations, road maintenance, mowing.

◆ **Ringed Boghaunter (*Williamsonia lintneri*) - Special Concern, S2S3**

Brief Description: A small brown dragonfly with a yellow face and orange bands on the posterior ends of abdominal segments 2-9.

Distribution: Largely confined to eastern Massachusetts, Rhode Island, Michigan and Wisconsin.

Habitat: Found in sedge meadows with Sphagnum pools. Adults usually in forested wetland or drier adjacent forest. Immatures found in shallow water pools including moats.

State Records: Restricted in WI to Central Poor Fen natural community in the study area. All 11 state records from the central-sands region in the late 1990s.

Black River/Meadow Valley Records: 9 of the state's 11 records are from the study area in the late 1990s.

Conservation Concerns: Destruction of forested upland and filling of sites a great threat, as well as ditching and mowing. Pesticides, water level manipulations, pollution, and collection are apparent threats.

Terrestrial Invertebrates

◆ **Dusted Skipper (*Atrytonopsis hianna*) - Special Concern, S2?**

Brief Description: This fairly large, medium brown to gray black skipper butterfly has pointed elongate forewing with three white subapical spots.

Distribution: Widespread range, but apparently local, colonial distribution.

Habitat: This skipper is found in bluestem grasslands, and often on acid pine or pine-oak barrens or prairies. Old fields, woodland clearings, and power-line swaths are also utilized. Hostplant grasses: *Andropogon gerardii*, *Scoparius* spp.

State Records: The majority of the states 29 records are in the west-central region with a small handful in the northwest corner.

Black River/Meadow Valley Records: 14 records in the 1990s, primarily in the west of the study area.

Conservation Concerns: Habitat (bluestem grasslands, often on acid pine or pine-oak barrens or prairies) may be threatened in much of range.

◆ **Henry's Elfin (*Callophrys henrici*) - Special Concern, S2**

Brief Description: Small and brown butterflies, with a straight white line at the top of the ventral forewing.

Distribution: Has a wide range, but is rare throughout. Found in Quebec and south to Florida and Texas, and west to Michigan, Wisconsin, Nebraska, Kansas, and Missouri.

Habitat: Pine barrens. Host plants possibly are *Vacciniums* and or maple-leaved viburnum in Wisconsin.

State Records: 12 records in the state, half in the 1990s, all in the northern half of the state.

Black River/Meadow Valley Records: 5 of the state's 12 records occur in the study area.

Conservation Concerns: Uncertain.

◆ **Frosted Elfin (*Callophrys irus*) - WI Threatened, S1**

Brief Description: Small and brown butterflies, with an irregular white line at the top of the ventral forewing.

Distribution: Central and eastern U.S.. Central sands region in Wisconsin.

Habitat: Formerly more often in natural settings, such as grassy openings in barrens and savannas, especially the lupine feeding version. In Wisconsin, most populations occur in powerline and railroad right of ways, along sand or gravel roads through dry woods or pine barrens, and around old gravel pits. Hostplants: *Baptisia*, *Lupinus*, and *Crotalaria* spp. In Wisconsin, an obligate lupine feeder.

State Records: 18 records in the state, all in the central sands region.

Black River/Meadow Valley Records: 17 of the 18 state records are in the study area in three clusters.

Conservation Concerns: Threats include habitat loss, succession, inappropriate prescribed burning, suppression of wildfires, excessive deer damage to food plants, conversion of barrens to pine plantations. Standard rotational fire practices in the Midwest appear to be a substantial threat to this butterfly there (A. Swengel) even though pupae are underground and not directly harmed (Schweitzer) and probably explain its current absence from most suitable habitat there.

◆ **Gorgone Checker Spot (*Chlosyne gorgone*) - Special Concern, S3**

Brief Description: Underside hindwing of butterfly with zigzag pattern of alternation brown and white bars and scallops.

Distribution: Midwest and southern U.S. and south central Canada. Basically a broad area of the continental interior of the U.S. west of the Appalachians and east of the Rockies.

Habitat: Prairies, open ridges, glades in deciduous woods, waste areas. Hostplants: *Helianthus*, *Ambrosia*, *Iva*, and *Viguiera* spp.

State Records: There are 38 known records from the state, most in the southern half of the state.

Black River/Meadow Valley Records: 11 records, all from the mid to late 1990s.

Conservation Concerns: Uncertain.

◆ **Little White Tiger Beetle (*Cicindela lepida*) - Special Concern, S2S3**

Brief Description: A small tiger beetle, 10-11mm in length, brown background with greatly expanded white markings so beetle often appears mostly white.

Distribution: Central Plains, SW to Arizona, NE to New York and Eastern Coast.

Habitat: In WI sandy areas, blowouts and dunes. Also reported from beaches and streamsides.

State Records: 13 state records, all post 1970 and in the central to south-central part of the state.

Black River/Meadow Valley Records: 4 records all within the 1990s.

Conservation Concerns: Uncertain.

◆ **A Tiger Beetle (*Cicindela macra*) - Special Concern, S2**

Brief Description: A thin, brownish tiger beetle, 11.5-13mm in length, dull olive green with white markings.

Distribution: Midwestern species.

Habitat: Sandbars in larger rivers.

State Records: 6 records in the central part of the state.

Black River/Meadow Valley Records: 1 record attributed to somewhere in Wood County (mapped in study area).

Conservation Concerns: Uncertain.

◆ **A Tiger Beetle (*Cicindela patruela huberi*) - Special Concern, S3**

Brief Description: A large tiger beetle with muddy green to brown to black coloration as opposed to the bright green of *C. patruela patruela*.

Distribution: Endemic subspecies to central WI.

Habitat: Semi open pine barrens or dry oak woodlands where open ground exists, such as along trails.

State Records: 79 records in the state, mostly from the central portion.

Black River/Meadow Valley Records: 32 records.

Conservation Concerns: The main threat to this species is habitat destruction due to deforestation and fire suppression (ecological succession eliminates some habitats).

◆ **Short-winged Grasshopper (*Dichromorpha viridis*) - Special Concern, S2**

Brief Description: A grasshopper exhibiting two color phases, green and brown, and two wing length morphs, long-winged and short-winged. A specialist required for verifying identification.

Distribution: Eastern half of U.S. as well as central and eastern Mexico.

Habitat: Preferred habitat includes, grasses less than knee high, pastures, fields, roadsides, marginal wooded areas, lake sides, and pond sides.

State Records: One record in the state from the central sands region.

Black River/Meadow Valley Records: The first and only record of the species in the state in 1996.

Conservation Concerns: Uncertain.

◆ **Mottled Dusky Wing (*Erynnis martialis*) - Special Concern, S2**

Brief Description: A light brown with lavender cast butterfly. Very strong contrasting dark patches on all wings so it appears almost banded; tiny glossy spots on fore wing; brown fringes.

Distribution: Central and eastern U.S..

Habitat: Usually confined to hilly country, often near woods or in open brushy fields. Hostplant: *Ceanothus* spp.

State Records: The 11 state records occur in 4 pockets: Brown, Burnett, Jackson, and Sauk counties.

Black River/Meadow Valley Records: 3 records in the 1990s in or near barrens.

Conservation Concerns: Deer and gypsy moth spraying have accounted for most recent extirpations in Northeast.

◆ **Persius Dusky Wing (*Erynnis persius*) - Special Concern, S2**

Brief Description: A dusky wing butterfly. Forewing with patch at end of cell more gray than brown. Male forewing with numerous raised white hairs.

Distribution: The Great Lakes region and northeastern U.S., along the West Coast from southern U.S. border north to Alaska. Absent from a large part of the central U.S..

Habitat: Open areas, marshes, seeps, and sand plains. Hostplant: *Lupinus*, *Salix*, and *Populus* spp.

State Records: There are 23 known records, from nine counties, the majority from the central sand region of the state.

Black River/Meadow Valley Records: Over half, 13 of the 23 state's records occur.

Conservation Concerns: Uncertain.

◆ **Two-spotted Skipper (*Euphyes bimacula*) - Special Concern, S2S3**

Brief Description: A skipper butterfly. Forewings pointed. Fringe white. Upperside of male forewing with limited tawny patch; female dark, forewing with two pale spots. Underside of hindwing orange-brown. Veins paler.

Distribution: Northeast, upper Midwest, and east coast of U.S..

Habitat: Wet sedge meadows, marshes, and bogs. Hostplant sedges: *Carex trichocarpa*, assoc. with *C. stricta*.

State Records: There are 10 known records, from 8 counties, mostly from the eastern third and southern half of the state.

Black River/Meadow Valley Records: 3 records all from 1989 in three different marshes.

Conservation Concerns: Uncertain.

◆ **Phyllira Tiger Moth (*Grammia phyllira*) - Special Concern, S2**

Brief Description: A moth.

Distribution: Several disjunct ranges: Atlantic coastal region Maine to Florida; Great Lakes region; Colorado to Texas.

Habitat: Extensive areas of sandy soil, generally supporting barrens or disturbed old field type vegetation. This species feeds on corn, lupines, and other low plants.

State Records: 9 state records in the east-central portion of the state.

Black River/Meadow Valley Records: 1 record from 1993 in barrens.

Conservation Concerns: Threats unknown; may benefit from barrens restoration.

◆ **Midwestern Fen Buckmoth (*Hemileuca sp 3*) - Special Concern, S3S4**

Brief Description: A large, day-flying moth with light gray to black wings with yellow to white markings.

Distribution: Known from NE Indiana to Michigan and Wisconsin, and NE Ohio, and NW Pennsylvania.

Habitat: In WI, found in bogs and fens and oak barrens. Reported feeding on willow, oak, bog bean, and purple loosestrife.

State Records: 6 records occur throughout the state.

Black River/Meadow Valley Records: Half the state's records occur in the study area. 1 from 1971, and 2 from the 1990s.

Conservation Concerns: Uncertain

◆ **Leonard's Skipper (*Hesperia leonardus leonardus*) - Special Concern, S3**

Brief Description: A rich, tawny orange butterfly with thick black margins.

Distribution: Scattered in small colonies from New England and Ontario, west to Kansas, and south as far as Florida.

Habitat: Localized populations in damp meadows, open fields, and roadsides. Hostplants are a wide variety of grasses.

State Records: 8 records in the south and central portions of the state.

Black River/Meadow Valley Records: 1 record from 1992.

Conservation Concerns: Uncertain.

◆ **Cobweb Skipper (*Hesperia metea*) - Special Concern, S2**

Brief Description: A brown and tawny orange skipper butterfly. The wing span is about an inch.

Distribution: Found from Maine and Florida, west to Wisconsin and Texas.

Habitat: Old grassy fields or forest clearings overrun with wild strawberry and cinquefoil. Hostplant grass: *Andropogon* spp.

State Records: 12 records in the state, all but 1 in the western half. All post 1989.

Black River/Meadow Valley Records: 4 records all in the mid 1990s from Jackson County Forest Land.

Conservation Concerns: Uncertain.

◆ **Karner Blue Butterfly (*Lycaeides melissa samuelis*) - U. S. Endangered, Special Concern, S2S3**

Brief Description: A bluish, sexually dimorphic butterfly. Underside of both wings with continuous black subterminal line. Red-orange submarginal row broken into separate spots.

Distribution: Isolated populations from Wisconsin east to central New York and southern New Hampshire.

Habitat: Pine/oak barrens. Lupine is a required larval food plant.

State Records: There are approximately 300 records of this species from WI. The vast majority from the central sands region of the state, ranging NW through Burnett County.

Black River/Meadow Valley Records: The study area contains over a third of the state's 300 records and the state's first recorded sighting.

Conservation Concerns: Barrens and dry forest management, ATV use, utility and road maintenance.

◆ **Bog Copper (*Lycaena epixanthe*) - Special Concern, S2S3**

Brief Description: A small butterfly with upper side purple iridescent in males, mouse gray brown in females, underside pale tan or white and hindwing with tiny black spots and a zigzag red-orange border.

Distribution: Great Lake area of U.S. and Canada and northeastern U.S..

Habitat: Open bogs with cranberry and other ericaceous components. Hostplant: *Vaccinium* spp.

State Records: Known from 46 sites in WI, mostly in the northern third of the state.

Black River/Meadow Valley Records: 5 recent records in marshy areas.

Conservation Concerns: Activities that alter natural hydrological or biological properties of the known site.

◆ **Newman's Brocade (*Meropon ambifusca*) - Special Concern, S3**

Brief Description: A nocturnal moth.

Distribution: Midwest to Connecticut.

Habitat: Virtually nothing known about this apparently rare species. Congeners bore in grasses or sedges and knowing

which species this uses might improve inventory success.

State Records: 15 of the 16 state records occur in the southern half of the state.

Black River/Meadow Valley Records: 1 record from 1994.

Conservation Concerns: Uncertain.

◆ **American Burying Beetle (*Nicrophorus americanus*) - U. S. Endangered, WI Endangered, SH**

Brief Description: A large shiny black beetle with a bright orange markings on the face, pronotum and the elytra.

Distribution: Historically widespread in Eastern US and Ontario and Nova Scotia, Canada. Surveys in at least eight states included in its historic range have failed to discover remnant populations. Only known now from the extreme east and west edges of its historic range.

Habitat: Species exhibits broad vegetational tolerances, though natural habitat may be mature forests. Species is recorded from grassland, old field shrubland, and hardwood forests. Most sites have sandy soils.

State Records: All of the state's records are historic.

Black River/Meadow Valley Records: 1 record from 1940.

Conservation Concerns: Threats include habitat fragmentation, insecticide and bug-zapper use, disturbance of soils, and competition from vertebrate scavengers.

◆ **Jutta Arctic (*Oeneis jutta*) - Special Concern, S3**

Brief Description: A butterfly variable in coloration. Above, gray-brown. Both wings with yellow-orange submarginal band (usually interrupted). Variable number of small eyespots, more on forewing than hindwing.

Distribution: Holarctic. In North America the northern Great Lakes region, and south along the western montane region.

Habitat: Black spruce and sphagnum bogs and central poor fens. Seems to like small wooded islands in setting of open bog or fen. Hostplant sedges: *Eriophorum*, *Carex*, and *Juncus* spp.

State Records: Known from 43 sites in the 1990s, all from eleven far northern Wisconsin counties.

Black River/Meadow Valley Records: 3 records in the 1999.

Conservation Concerns: Increased sedimentation, water quality degradation, mossing, and water level alterations.

◆ **Spotted-winged Grasshopper (*Orphulella pelidna*) - Special Concern, S1?**

Brief Description: A grasshopper highly variable in coloration. Some females are mostly green, others mostly brown.

Distribution: Widespread over North America south to northern Mexico.

Habitat: Variable across its range. From grasslands and old fields to beach dunes.

State Records: 4 records all occurring in the south central section of the state. All occurring in the late 1990s.

Black River/Meadow Valley Records: 3 of the 4 state records occur in the study area.

Conservation Concerns: Uncertain.

◆ **Mulberry Wing (*Poanes massasoit*) - Special Concern, S3**

Brief Description: A butterfly with rounded wings. Black with tiny (male) or slightly larger (female) spots. Underside hindwing with large irregular yellow central patch.

Distribution: Coastal southern New England and upper mid-Atlantic states. Great Lakes region extending west into southern Minnesota, northern Iowa, and the eastern edge of the Dakotas.

Habitat: Freshwater marshes or bogs. Hostplant sedge: *Carex stricta*.

State Records: There are 45 records, widely scattered, but absent from northern and far western WI.

Black River/Meadow Valley Records: 1 record from 1988.

Conservation Concerns: Wetland loss, alteration.

◆ **Net-veined Leafhopper (*Polyamia dilata*) - WI Threatened, S1**

Brief Description: A small, wedge-shaped, globally rare jumping insect.

Distribution: Only about 20 known sites rangewide which is western Iowa, Driftless Area of WI and Indiana. Possible

Arkansas as well.

Habitat: Has been associated with cool season *Panicum* grasses.

State Records: 12 records in 1997 and 1998 in the southwestern portion of the state.

Black River/Meadow Valley Records: 1 record from 1997.

Conservation Concerns: Uncertain.

◆ **Sand Locust (*Psinidia fenestralis*) - Special Concern, S1S2**

Brief Description: A locust with a narrow yellow stripe on the head. Hind-wing orange, red, or yellow with broad black band.

Distribution: Minnesota to Maine, south to Texas and Florida.

Habitat: Sandy areas.

State Records: 4 state records from the late 1990s occur in the west-central region.

Black River/Meadow Valley Records: 3 of the 4 state records occur within the study area.

Conservation Concerns: Uncertain.

◆ **Phlox Moth (*Schinia indiana*) - WI Endangered, S2?**

Brief Description: A striking, purple, medium-sized moth.

Distribution: Reported from Indiana, Illinois, North Carolina, Arkansas, Texas, Nebraska, Wisconsin, Minnesota, and Michigan. Only Wisconsin, Minnesota, and Michigan currently report having populations.

Habitat: Roadsides, scrub-oak pine barrens and prairies with *Phlox pilosa*, the larva's food plant.

State Records: There are 22 records from 5 counties, most from the central sands region of the state.

Black River/Meadow Valley Records: 10 records from the mid 1990s.

Conservation Concerns: Roadside maintenance.

◆ **Northern Marbled Locust (*Spharagemon marmorata*) - Special Concern, S2S3**

Brief Description: A locust with basal area of hind-wings yellow, with broad outer dark band. Overall body color variable. Pale bands on forewing do not cross the wing.

Distribution: Wisconsin's subspecies ranges from Minnesota east into southern Canada and New England, and south along the Atlantic Coast through New Jersey.

Habitat: Variable within range. Often on bare sand or open scrub, in Michigan it was found among bracken fern and blueberry in an open forest. Often associated with lichens in open habitats.

State Records: There are 10 records from five counties. Mostly in the west-central portion of the state with one outlier in Shawano county.

Black River/Meadow Valley Records: 5 records from the late 1990s.

Conservation Concerns: Barrens and sand blow management.

◆ **Ash-brown Grasshopper (*Trachyrhachys kiowa*) - Special Concern, S2**

Brief Description: A grasshopper with hind-wings variable in color. A technical key is needed to distinguish this species.

Distribution: Southwestern Canada south to central Mexico, and in the U.S. from California east to Virginia.

Habitat: Bare gravelly ground.

State Records: There are only 4 known records from the state. Three from the central sands and one from Waupaca county.

Black River/Meadow Valley Records: 3 of the state's 4 records are from the study area and are from the late 1990s.

Conservation Concerns: Barrens, sand blow alterations.

Miscellaneous Elements

◆ **Bat Hibernaculum (bat hibernaculum) - Special Concern, S3**

Brief Description: A building/cave where bats overwinter. Hibernaculums may be composed of several different species of bats or just one.

Distribution: Widespread.

Habitat: Typically caves, old mines, and abandoned buildings.

State Records: The majority of the 46 records in the state lie within its western half.

Black River/Meadow Valley Records: 1 bat hibernaculum record from 1969.

Conservation Concerns: Disturbance by humans, mines being boarded up.

◆ **Bird Rookery (bird rookery) - Special Concern, SU**

Brief Description: Nesting colonies of large wading (fish eating) birds, typically herons and egrets.

Distribution: Widespread.

Habitat: Snag or large trees, typically near wet areas. Occasionally on bare ground.

State Records: 42 records occur throughout the state.

Black River/Meadow Valley Records: 3 records post 1985, all occurring in large wetland complexes.

Conservation Concerns: Disturbance, removal of nesting trees.